



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,772	08/06/2001	Max Henrion	019518-002010US	9387

20350 7590 01/28/2004

TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER

ABEL JALIL, NEVEEN

ART UNIT

PAPER NUMBER

2175

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/923,772

Applicant(s)

HENRION ET AL.

Examiner

Neveen Abel-Jalil

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on November 10, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-26 is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) CENTER 2100
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

SUPERVISORY PATENT EXAMINER

### DETAILED ACTION

1. The amendment filed on November 10, 2003 has been received and entered. Claims 21-26 have been added; therefore claims 1-26 are now pending.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, and 6-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fratkina et al. (U.S. Pub. 2001/0049688) in view of Marchisio (U.S. Patent No. 6,510,406).

As to claim 1, Fratkina et al. discloses a method for assisting a user in selecting one or more items from an item set that best match a set of target preferences (See page 13, column 2, lines 33-48), the method comprising:

obtaining information from the user about that user's set of target preferences, using direct questions (See page 13, column 2, lines 33-48);

generating at least one list of items selected from the item set that will best meet the set of target preferences (See page 20, column 1, lines 55-67, wherein "target preference" reads on "possible answers or highly relevant information to the user") based on the one or more relative

importance values for one of more attributes (See page 19, paragraphs 03249-0352, also see page 8, paragraphs 0189-0190); and

generating a display including the list of items and explanations for at least one item on the list of items explaining how well one or more attributes of the at least one item match the set of target preferences (See page 8, column 2, lines 14-67, wherein “explanation” reads on “short synopsis”, and wherein “preferences” reads on “attributes”, and wherein “display” reads on “dialog”, also see page 11, column 1, lines 20-34, wherein “list” reads on “ranking”).

Fratkina et al. does not teach associating the set of target preferences with one or more attributes; determining one or more relative importance values for the one or more attributes based on the obtained information.

Marchisio teaches associating the set of target preferences with one or more attributes; determining one or more relative importance values for the one or more attributes based on the obtained information (See column 8, lines 1-32, and see column 3, lines 55-67, and see column 9, lines 52-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Fratkina et al. to include associating the set of target preferences with one or more attributes; determining one or more relative importance values for the one or more attributes based on the obtained information.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Fratkina et al. by the teaching of Marchisio to include associating the set of target preferences with one or more attributes; determining one or more relative importance values for the one or more attributes based on the obtained information because It allows for efficient data retrieval and accurate responses to user's queries.

As to claim 2, Fratkina et al. as modified discloses wherein the item is a product, service or other selectable element (See page 1, column 2, lines 25-32, also see page 1, column 1, prior art, lines 32-57).

As to claim 3, Fratkina et al. as modified discloses wherein the information obtained from questions to the user is supplemented with other information about the user (See page 1, column 2, lines 34-49).

As to claim 6, Fratkina et al. as modified discloses further comprising a step of providing the user with explanations of recommendations (See page 8, column 2, lines 14-31, wherein "explanation" reads on "short synopsis"), where each explanation contains at least one pro or at least one con, and the explanation refers to an attribute of the item and identifies how well the attribute meets the user's set of target preferences (See page 8, column 1, lines 32-51, wherein "how well the attribute" reads on "indicated the knowledge container's strength of association", and wherein "user's set of target preferences" reads on "tag created by a person").

As to claims 7, and 14, Fratkina et al. as modified discloses wherein one or more pro or con includes a reference to the set of target preferences (See page 13, column 2, lines 51-67, and page 14, column 1, lines 1-25, wherein “pro” reads on “positive”, and wherein “con” reads on “negative”).

As to claim 8, Fratkina et al. as modified discloses further comprising generating a statement relating one or more pro or con to a matching of an attribute and a recommendation for or against an item based on indirect inferences from user inputs (See page 14, column 2, lines 25-40, wherein “indirect” reads on “learned from interacting with the customer”, also see page 18, column 2, lines 57-67, also page 19, column 1, lines 65-67, and page 19, column 2, lines 1-25).

As to claim 9, Fratkina et al. as modified discloses wherein each explanation includes those pros and cons that have high estimated decision relevance to the user, and excludes at least one mention of a low estimated relevance attribute (See page 19, column 2, lines 26-56, wherein “excludes” reads on previous printer information is no longer relevant”).

As to claim 10, Fratkina et al. as modified does not disclose further comprising:  
a step of estimating decision relevance of an attribute to the user as an increasing function of estimated importance of the attribute to the user and an absolute relative preference value,

wherein the absolute relative preference value of a given item is a measure of a difference between an attribute value for the given item and an average value of the attribute for items in the list of items other than the given item.

Marchisio discloses further comprising:

a step of estimating decision relevance of an attribute to the user as an increasing function of estimated importance of the attribute to the user and an absolute relative preference value (See column 17, lines 47-67, also see column 2, lines 3-43),

wherein the absolute relative preference value of a given item is a measure of a difference between an attribute value for the given item and an average value of the attribute for items in the list of items other than the given item (See column 7, lines 40-65, and column 8, lines 1-19, wherein “difference” reads on “lambda”, also see column 9, lines 52-67, wherein “average” reads on “weighting”, and wherein “list” reads on “matrix”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Fratkina et al. to include further comprising:

a step of estimating decision relevance of an attribute to the user as an increasing function of estimated importance of the attribute to the user and an absolute relative preference value,

wherein the absolute relative preference value of a given item is a measure of a difference between an attribute value for the given item and an average value of the attribute for items in the list of items other than the given item.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Fratkina et al. by the teaching of Marchisio to include further comprising:

a step of estimating decision relevance of an attribute to the user as an increasing function of estimated importance of the attribute to the user and an absolute relative preference value,

wherein the absolute relative preference value of a given item is a measure of a difference between an attribute value for the given item and an average value of the attribute for items in the list of items other than the given item because statistical analysis of “target matching” allows for efficient database storage and retrieval providing the users with accurate results.

As to claim 11, Fratkina et al. as modified discloses further comprising generating for display to the user a list of common attributes (See page 19, column 2, lines 41-56, wherein “attributes” reads on “parameters”) for which all of the items on the list of items have common values (See page 8, lines column 2, lines 29-31, wherein “common” reads on “subset”, also see page 14, column 1, lines 63-67, and page 14, column 2, lines 1-9, wherein “list” reads on “ranking”).

As to claim 12, Fratkina et al. as modified discloses wherein the list of common attributes includes attributes that have values in a common range (See page 19, column 2, lines 12-14, also see page 19, column 2, lines 47-56, wherein “attributes” reads on “parameter”).

As to claim 13, Fratkina et al. as modified discloses wherein the list of common attributes includes pros and cons for attributes that have high estimated importance to the user and excludes at least one pro or con for at least one attribute that has a low estimated importance to the user (See page 18, column 1, lines 20-42, also see page 23, column 1, lines 28-45).



As to claim 15, Fratkina et al. as modified discloses further comprising generating a statement relating one or more pro or con to a matching of an attribute and a recommendation for or against an item based on indirect inferences from user inputs (See page 15, column 1, lines 36-60, wherein “user inputs” reads on “user selections on the screen”, wherein “pro” reads on “relevance ... confirmed”, and wherein “con” reads on “irrelevant or rejected”).

As to claim 16, Fratkina et al. as modified discloses further comprising offering questions to the user in a sequence that is determined dynamically based on answers to previous questions (See page 15, column 2, lines 40-67, also see page 19, column 1, lines 49-67).

As to claim 17, Fratkina et al. does not disclose wherein sequence of questions, is based on a priority calculated as an increasing function of the uncertainty about the importance of the attributes to which the question pertains and the variation in attribute relative importance values among the items.

Marchisio discloses wherein sequence of questions, is based on a priority calculated as an increasing function of the uncertainty about the importance of the attributes to which the question pertains and the variation in attribute relative importance values among the items (See column 7, lines 28-45, also see column 8, lines 1-32, and see column 9, lines 52-67, and column 3, lines 55-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Fratkina et al. to include wherein sequence of questions, is

Art Unit: 2175

based on a priority calculated as an increasing function of the uncertainty about the importance of the attributes to which the question pertains and the variation in attribute relative importance values among the items.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Fratkina et al. by the teaching of Marchisio to include wherein sequence of questions, is based on a priority calculated as an increasing function of the uncertainty about the importance of the attributes to which the question pertains and the variation in attribute relative importance values among the items because calculating uncertainty and ranking results based on priority provides for faster processing time in database query and retrieval.

As to claim 18, Fratkina et al. as modified discloses wherein the variation of attribute **relative importance** value among the items is weighted to the values of the items with the high current ranking (See page 23, column 1, lines 1-24, also see page 14, paragraphs 0275-0279, and see Marchisio column 3, lines 55-67, and Marchisio column 9, lines 52-67) so that the question priority reflects the expectation that answers to the question are likely to change the ranking of the top ranked items (See page 14, column 1, lines 63-67, and see page 14, column 2, lines 1-9).

As to claim 19, Fratkina et al. as modified discloses wherein the system mentions for each unmet requirements and selected combinations of requirements the number of items it or they eliminate as unacceptable (See page 10, column 1, lines 23-37, also see page 21, column 2, lines 1-17).

As to claim 20, Fratkina et al. as modified discloses wherein if no item meets all requirements specified by the user (See page 14, column 2, lines 1-23), the system displays a conflict page that mentions the fact that no items meet all requirements and lists the requirements that cannot be simultaneously met (See page 4, column 2, lines 32-57, also see page 19, column 1, lines 49-67).

As to claim 21, Fratkina et al. as modified discloses wherein if no item meets all requirements specified by the user, the system determines a best match based on the one or more relative importance values for the one or more attributes (See pages 22-23, paragraphs 0382-0383).

4. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fratkina et al. (U.S. Pub. 2001/0049688) in view of Marchisio (U.S. Patent No. 6,510,406) as applied to claims 1-3 above, and further in view of Busey et al. (U.S. Patent No. 6,377,944).

As to claim 4, Fratkina et al. as modified discloses wherein the other information includes one or more of information provided by the user during online interactions (See page 2, column 2, lines 41-48).

Fratkina et al. as modified still does not disclose information provided by the user during offline interactions.

Art Unit: 2175

Busey et al. discloses information provided by the user during offline interactions (See column 10, lines 23-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Fratkina et al. as modified to include information provided by the user during offline interactions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Fratkina et al. as modified by the teaching of Busey et al. to include information provided by the user during offline interactions because it provides for accurate data collection and tracking of customer's profile and preference leading to efficient database operation and storage.

As to claim 5, Fratkina et al. as modified discloses wherein the information provided by the user is one or more of registration information, information about prior selections, information about prior purchases and information about prior interactions with automated decision advisors (See page 17, column 1, lines 13-28, also see page 18, column 2, lines 57-67, and page 19, column 1, lines 1-3, also see page 9, column 1, lines 55-61).

#### ***Reasons for Allowance***

4. Claims 22-26 are allowed over the prior art made of record.
5. The following is a statement of reasons for allowance:

The prior art of record (Fratkina et al. -U.S. Pub. 2001/0049688 - and Marchisio -U.S. Patent No. 6,510,406 – and Busey et al. -U.S. Patent No. 6,377,944) do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), outputting one or more questions about a user's preferences; receiving answers for the one or more questions related to the user's preferences; for each answer to a question in the one or more questions, performing the steps of:

determining one or more attributes that are associated with the question; and updating or specifying a relative importance value for the one or more based on the answer to the question, wherein a relative importance value is updated for an attribute when the attribute was associated with a prior question and specified when the attribute was not associated with a prior question; generating at least one list of items selected from the item set based on the relative importance values for the one or more attributes determined for the answers for the one or more questions; and outputting the at least one list of items, as found in independent claim 22.

Claims 23-26 are allowed over the prior art made of record, because it is dependent from the allowed independent claim 22.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Art Unit: 2175

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 703-305-8114. The examiner can normally be reached on 8:00AM-4: 30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Application/Control Number: 09/923,772  
Art Unit: 2175

Page 14

Neveen Abel-Jalil  
January 25, 2004



DOV POPOVICI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100